Remarks:

Claims 12 and 21 have been amended to include the subject matter of claims 16 and 26 indicated to be allowable. Claims 32, 33 and 36 have been allowed. The Section 112 objection has been cured by removing the language that was objected to.

New claims 52 and 53 have been added which are directed to a prosthesis formed of a ring comprising a bundle of overlapping windings formed of a strand of resilient wire, said ring secured to one free end of a tubular graft.

The Kwan-Gett and Inoue patents cited previously show no such structure. For example, Kwan-Gett describes a coil spring type structure. However, the windings do not overlap to form a ring made up of a bundle of overlapping windings and the bundle is not attached in bundle form adjacent one free end of the graft.

The composite ring formed of individual windings has a better balance of minimum bending diameter and clamping force. The use of individual windings decreases minimum bending diameter (as opposed to a solid ring), allowing a compact structure. The formation of those windings into a ring composite generates an additive clamping force (allowing the ring to firmly engage a vessel wall).

As explained in the specification (beginning at page 9, line 1), according to Hooke's law, the individual strands 32 may be regarded as parallelly connected springs whose deflection characteristics are additive and whose individual low radial tension forces add up to a total tension force which depends on the number of windings. When the entire ring is compressed, each individual strand or winding has a bending diameter approximately corresponding to the minimum bending diameter of the individual strand.

As an approximation, the minimum bending diameter of the strand or winding is approximately ten times the wire diameter. This suggests that the ring wire diameter be kept low. However, the ring's clamping force on a body passage is a function of its diameter, suggesting conversely that the wire diameter be increased. This trade off can be optimized by using a plurality of strands, whose strand diameter controls the minimum bending diameter, to form a bundle whose composite diameter controls the clamping force.

In view of these remarks, the application is now in condition for allowance and the Examiner's prompt action in accordance therewith is respectfully requested.

Respectfully submitted,

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